August 20, 2018

VIA ELECTRONIC FILING

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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *Consumer and Governmental Affairs Bureau Seeks Input for Report on Robocalling*, CG Docket No. 17-59

Dear Ms. Dortch:

Hiya offers an analytical approach to unwanted and illegal robocall detection through analysis of telephony traffic, and consumer complaints from a variety of sources (including FCC and FTC). This analytical detection powers the call protection services offered by our own proprietary apps, AT&T Call Protect, and Samsung Smart Call.

We have been closely observing the progress from the FCC towards a manageable and effective ecosystem to prevent these unwanted calls. We've been observing and measuring the impacts of analytics services such as ourselves and our competitors, on both the illegal call space and also the legitimate telephony call industry. We have also observed the activity of the illegal callers themselves to avoid the efforts of all players attempting to curb the overwhelming unwanted call activity that, if left unchecked, could mean the death of the phone call. We would like to share some of these observations with the FCC.

The consequences of an unfettered industry

Over the past year, most major service providers within the United States have adopted some solution for analytical detection of unwanted calls. With this adoption has come an increase in consumer protection, certainly. But we have also observed the expanding issue of legitimate calls wrongly flagged ("false positives"), and have spoken with the businesses most directly affected. Analytic services have no quality standard to which they adhere, and some services are striving for

maximum protection at the expense of legitimate calls. We feel it's critical that the FCC continue to support efforts that can minimize the uncertainty in determining call legitimacy, and that the industry needs to self-regulate the quality standards expected of robocall detection services.

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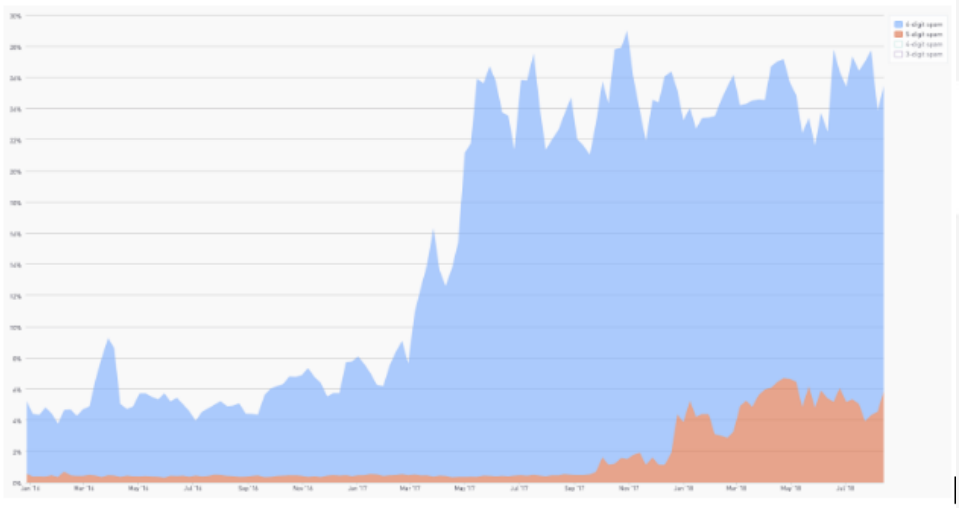
As this problem has grown, the larger issue is becoming exacerbated as the legitimate businesses begin adopting similar tactics as the illegal robocallers themselves to avoid detection. Through behaviors such as using "neighbor" numbers at low volumes and fast number rotation, the legitimate callers target the same loopholes in spam detection. Analytics services such as Hiya are working hard to close those loopholes, so unfortunately the issue of false positives is likely to expand. It becomes increasingly critical, therefore, to ensure legitimate operators are able to place their calls unimpeded so they do not feel the need to adopt the tactics of illegal call originators.

The prevalence of neighbor spoofing

The technique known as "neighbor spoofing" (where the number's NPA and NXX are spoofed to match that of the call recipient) continues to be the single most pervasive technique we have ever observed in the illegal call industry. Further, in 2018 we have observed the robocallers migrate to only a 5-digit match, likely in response to the efforts by Hiya and other analytics services, and the service providers, to block this specific technique.



Together, 6-digit and 5-digit neighbor spoofing near 25% of all complaints

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A massive industry shift expected from STIR/SHAKEN

While it is often stated that STIR/SHAKEN cannot halt the illegal robocall industry entirely (no industry that profitable is likely to ever be fully stopped), we at Hiya believe its release will lead to a drastic shift in the illegal robocall generation industry. As long as STIR/SHAKEN can effectively remove call spoofing from the arsenal of tools available to the robocallers, techniques like neighbor spoofing will forcibly come to a halt. Without the advantage of simple call spoofing, the illegal robocall activity becomes far simpler for analytics services to detect and for service providers to prevent.

Hiya has worked closely with ATIS and our service provider partners on the proper deployment plan for STIR/SHAKEN. Our recommendations on how to surface the results of STIR/SHAKEN attestation were recently ratified by ATIS[1], stressing the value of this functionality for illegal call detection specifically. This value far outweighs any "certified caller" or "green checkmark" concept, which is likely to be misleading initially (before SHAKEN is widely adopted) and dangerous in the long run (when nearly all calls become "certified", even the illegal robocalls who have abandoned spoofing).

More collaborative tools are needed

Today, the largest gap in the fight against illegal robocalling is within the service providers themselves. In the FCC's recent declaration to permit automatic blocking, calls from invalid or unallocated numbers and calls from phone numbers allocated but not used to generate phone calls ("Do Not Originate") may be blocked. However, the service provider industry lacks both a common repository of unallocated numbers, and lacks a shared registry of Do Not Originate phone lines. A more cooperative position by the service providers to collaborate on this data can strengthen all analytics services in their accuracy and efficiency. We hope the FCC can encourage the service providers to collaborate in such a manner.

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[1] ATIS-1000081; https://access.atis.org/apps/group_public/download.php/40779/ATIS-1000081.pdf

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FCC and FTC lists effective but dated

Along with most analytics services, Hiya regularly considers the user reports published by the FCC and by the FTC, and finds the lists to be a very effective tool in robocall detection (with proper analytics). Unfortunately, the effectiveness of these reports is greatly hindered by the lengthy delay in the publishing of the reports. The FCC reports list is updated once a day, while the FTC list is updated daily except for Friday, Saturday, and Sunday which are all published on Monday. In the meantime, illegal robocallers are using and then abandoning phone numbers in a matter of hours. Frequently, by the time these reports are available to analytics services for use in spam protection, the number that was reported has long since been abandoned.

Additionally, both the FCC and FTC lists lack support for any free-form comment of explanation from the individual generating the report. Services like Hiya rely heavily on direct user feedback in order to properly categorize spam activity, to differentiate between random spoofing and targeted spoofing (impersonation attacks against businesses or government agencies), and to minimize false positives. Collection and inclusion of these comments would drastically improve the analytics space, providing far superior service to all consumers.

Consumer choice on how to field incoming call traffic

Hiya uses consumer comments to discern the exact style or message of robocall behavior, including common categories such as telemarketing, surveys, or scams including the IRS scam. Consumers are then offered the choice of how to manage incoming calls based on that classification. The exact choices available vary by service or client, but usually offer the ability to either allow (with warning) or outright block (or push to voicemail) the incoming call based on categories. This allows the consumer the freedom to choose what flavors of incoming calls they wish to receive. Hiya does not discern between legal but potentially unwanted calls, vs. illegal robocalls or scams at this level. This is considered a consumer decision, where Hiya strives only to provide the most accurate information possible.

For Hiya and for our competitors in this space, the most critical distinction to be made of call intent is between fraudulent and non-fraudulent activity. The most common option to automatically block incoming calls is against those considered fraudulent, and most

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services/applications will have this functionality enabled automatically ("opt-out", meaning the user must turn the functionality off). This space becomes most critical for accuracy, and there are cases where false positives of "Scam Likely" against legitimate businesses can cause the greatest harm.

Looking to one of our consumer applications as an example, we observe roughly 20% user rates to automatically block spam call activity (an opt-in feature), vs. 95% user rates to automatically block fraud call activity (an opt-out feature). This demonstrates both the user desire to outright prevent unwanted calls, and also the dramatic difference that opt-in vs. opt-out can have on user experience.

20% of users choose to block spam; 5% choose to stop blocking fraud

Conclusion

It is the perspective of Hiya that the efforts initiated or supported by the FCC have strengthened the importance of consumer call protection within the industry. While at this time we still struggle to see explicit concrete improvements to robocall detection, the impetus that the FCC has given this issue is clearly creating movement across the industry.

However, we hope the FCC can continue to push for those concrete improvements through collaboration among the US service providers. STIR/SHAKEN will be a valuable resource when completed, but it cannot stop illegal robocall activity alone. The use of collaborative information sharing including allocated number lists and Do Not Originate registries can make a difference both now and after the launch of STIR/SHAKEN. We also hope to see better use of the data that does already exist today, including the FCC and FTC report lists offered in a more timely manner.

In the meantime, the movement towards consumer protection immediately can have unwanted consequences. In the push to make a difference with the tools and information on hand, some players within

the analytics services space are running the risk of false positives and harming the legitimate US business spaces that still rely on phone calls to reach their current and potential customers. Services need to remain aware of the impact they can have, given consumers' willingness to outright block any phone call deemed a potentially unwanted call, regardless of the actual caller.

Sincerely,

/s/ Jonathan Nelson

Jonathan Nelson
Director of Product Management, Hiya

hiya

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